

ABSTRACT OF THE DISCLOSURE

[64] A magnetic field sensor comprises one or more magnetic layers of magnetostrictive material that is mechanically bonded to one or more layers of electroactive material. When a magnetic field is applied to the device, it rotates the magnetization that is present in the in the magnetostrictive material thereby generating a magnetostrictive stress in the material. The magnetostrictive stress generated by this layer, in turn, stresses the piezoelectric layer to which the magnetostrictive layer is bonded. In order to increase sensitivity, the voltage across the piezoelectric material is measured in a direction that is parallel to the plane in which the magnetization in the magnetic material rotates.